

CELL-DYN Ruby



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HEMATOLOGY ANALYZER

GET IT RIGHT THE FIRST TIME

CHOOSE TRANSFORMATION™

Achieve measurably better healthcare performance.

www.corelaboratory.abbott/hematology

 **Abbott**

First Pass Efficiency. Getting It Right the First Time.



OPERATIONAL EFFICIENCY

- Offers 35 minutes of walkaway time with load up of 50 specimens
- Accommodates tubes of various sizes in open and closed modes
- Integrates with AlinIQ AMS and other popular middleware packages



FLEXIBLE AND EASY-TO-USE

- Screens are straightforward, intuitive and easy to navigate
- Features customizable views
- Quickly set up or change many analyzer options based on laboratory need or protocols



REAGENT MANAGEMENT

- Only 3 reagents required for CBC with differential
- Real-time reagent status monitoring
- RFID reagents work with AlinIQ Inventory Management System (IMS)



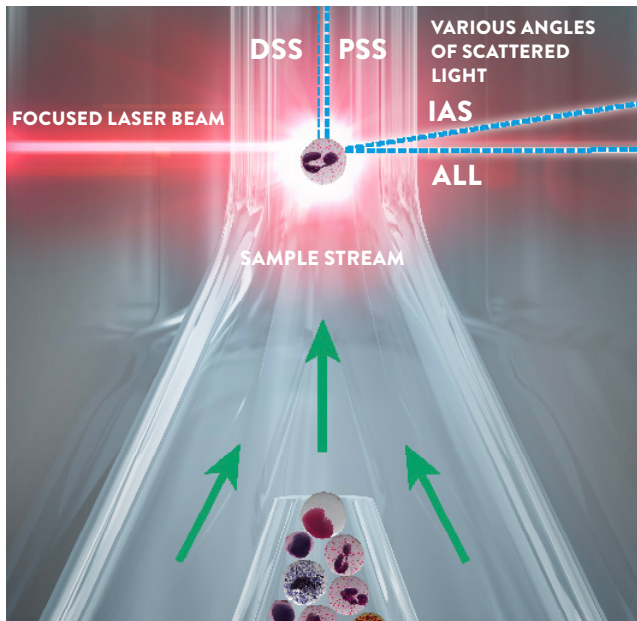
SINGLE-USE RETICULOCYTE OPTION

- Cost-effective stability until printed expiry date on package
- Reagent is available in 100 test package
- No refrigeration required



Enhanced first pass efficiency with MAPSS™ technology

HIGHLY DISCRIMINATE, SEQUENTIAL SEPARATION USING MAPSS™ TECHNOLOGY



MAPSS™ (MULTI-ANGLE POLARIZED SCATTER SEPARATION) TECHNOLOGY PROVIDES LASER-ACCURATE OPTICAL READINGS FOR WBCs AND DIFFERENTIALS

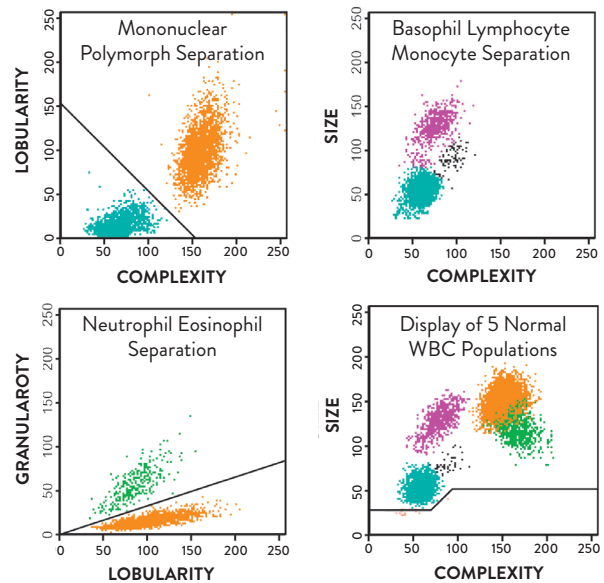
- Axial Light Loss (ALL) provides total count and size of each cell
- Intermediate Angle Scatter (IAS) indicates complexity of intracellular structure
- Polarized Side Scatter (PSS) provides details on granularity and nuclear lobularity, separating mononuclear from polymorphonuclear cells
- Depolarized Side Scatter (DSS) separates neutrophils from eosinophils

MAPSS™ LASER TECHNOLOGY A HIGHER LEVEL OF INTERROGATION

- Analysis performed on up to 10,000 cells from a single dilution, using a single reagent
- Captures up to 40,000 data points

MAPSS™ RESULTS ARE DISPLAYED IN MULTIPLE ELEGANT, COLOR-CODED SCATTERPLOTS

- Discriminates between neutrophils, eosinophils, basophils, monocytes and lymphocytes
- Identifies and flags immature cells and interfering substances



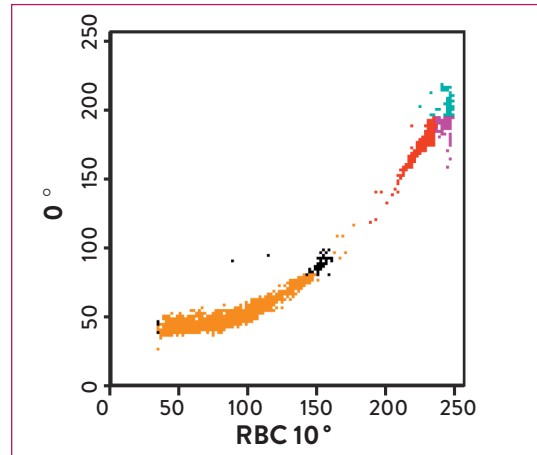
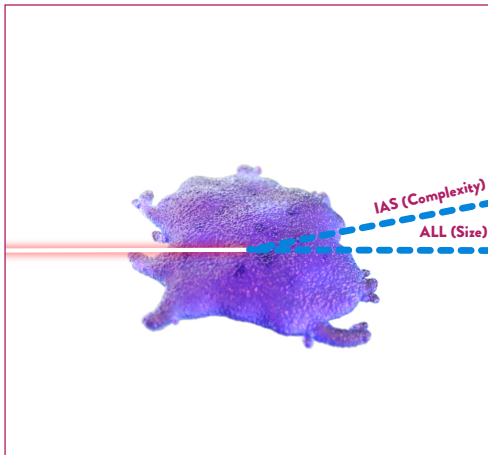
How MAPSS™ differentiates and classifies

Cell	Size	Complexity	Lobularity	Granularity	Classification			
					1st	2nd	3rd	4th
	0°	10°	90°	90° Depolarized	1st	2nd	3rd	4th
1	165	162	116	32	POLY	NEU	-	-
2	60	64	15	6	MONO	-	-	LYM
3	140	79	21	99	MONO	-	-	MONO
4	148	182	104	118	POLY	EOS	-	-
5	90	110	28	8	MONO	-	BASO	-

Two-dimensional Optical Platelet (PLT) Analysis

REPORTABLE PLATELET COUNTS ACROSS A WIDE VARIETY OF ABNORMAL CONDITIONS

- First Pass two-angle analysis separates the PLT and RBC populations
- Reduces interference from microcytic RBCs, schistocytes and non-platelet particles
- Obtain reportable results in the presence of giant or clumped PLTs and on thrombocytopenic samples *without reflexing or extra reagents*

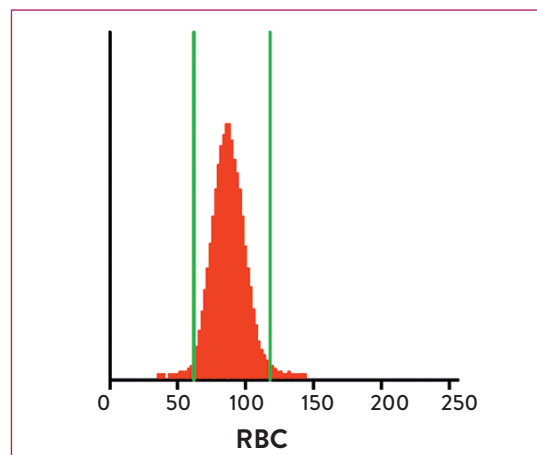
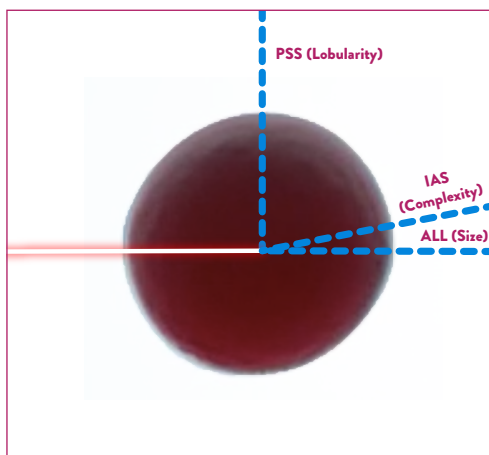


First Pass Optical Platelet Count: Platelets and RBCs are accurately sized and counted by multidimensional laser light scatter. Whole blood is diluted into a proprietary reagent system that optimizes the separation of platelets and RBCs, spheres the RBCs and reduces interference by microcytic red cells and non-platelet particles.

Three-dimensional Optical Red Blood Cell (RBC) Analysis

IMPROVES THE ACCURACY OF RED CELL MEASUREMENTS, INCLUDING RETICULOCYTES

- Comprehensive cell-by-cell measurements with readings taken at 0°, 10° and 90° by light scatter detectors enable exquisite accuracy of RBCs and reticulocytes
- Reticulocyte assay based upon NCCLS/ICSH methods

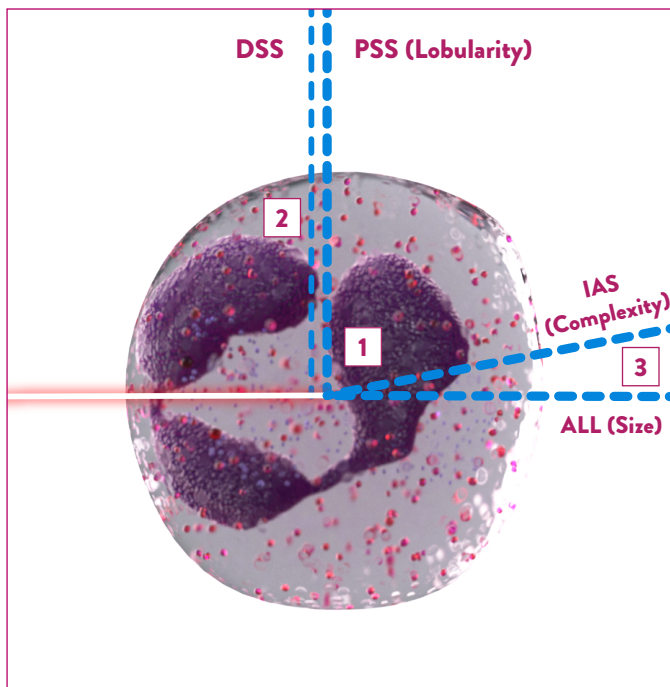


Red cell size and size distributions are displayed using a histogram constructed from the cell-by-cell volume calculated using the 0°, 10° and 90° light scatter measurements of each sphered red blood cell.

Four-dimensional White Blood Cells (WBC) Analysis

WBCs ARE COUNTED AND CLASSIFIED SO THAT RESULTS CAN BE REPORTED ON THE FIRST RUN, EVEN WHEN ABNORMAL CELLS AND INTERFERING SUBSTANCES ARE PRESENT

- Reduce manual reviews due to interference from NRBCs, clumped platelets and debris
- MAPSS™ technology can detect potential interference from lysis-resistant RBCs; the flagged samples can be re-run in the lysis-resistant mode without microscopic review (Figure 1 and 2)



- 1** Neutrophils and eosinophils are separated from lymphocytes, monocytes and basophils by differences in their complexity and lobularity.
- 2** Neutrophils are separated from eosinophils by virtue of their different characteristics in scattering polarized (PSS) and depolarized (DSS) light.
- 3** Basophils are separated using both size (ALL) and complexity (IAS) readings, allowing lymphocytes and monocytes to be separated by size (ALL) information.

The net result of the simultaneous laser scatter readings is excellent discrimination among the 5 normal cell populations.

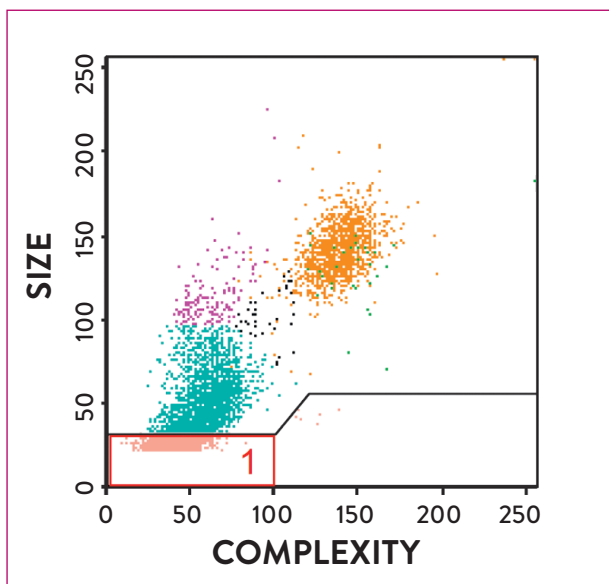


Figure 1: The occurrence of a significant population of cells occurring below the dynamic WBC Optical Count (WOC) threshold can suggest the presence of lysis-resistant RBCs.

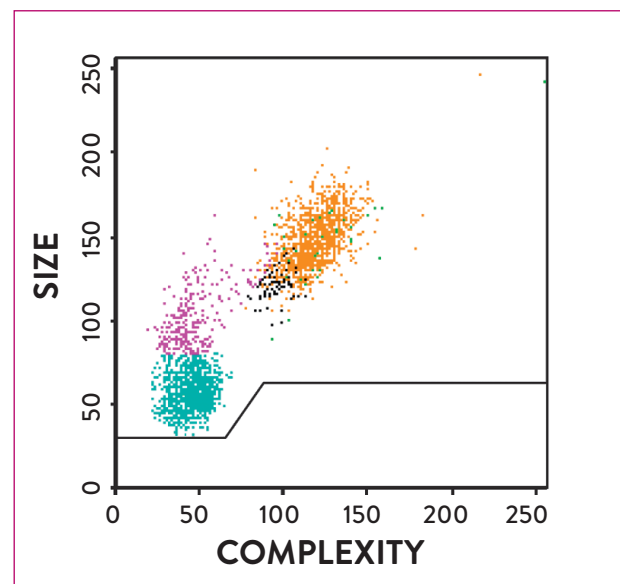


Figure 2: In cases where lysis-resistant RBCs occur, the sample is re-run in the resistant RBC mode to provide the 5 part differential.

Touch-Screen Convenience & Flexibility With Multifaceted Software

ENHANCE WORKFLOW EFFICIENCY WITH QC MANAGEMENT, USER-DEFINABLE DECISION RULES, SMART SOFTWARE FEATURES AND ABBOTTLINK

QUALITY CONTROL

- Users can store up to 500 quality control files
- Multiple Westgard Rules are available to select from
- Moving averages available for RBC, WBC, differential, PLT, and reticulocyte parameters

DATA MANAGEMENT

- Rules-based result annotations allow you to standardize lab processes to meet your laboratory's needs
- Program up to 100 rules and up to 48 result annotations to help streamline your data management processes

USER-FRIENDLY SOFTWARE PACKAGE

- Context-sensitive help menus
- Calibration wizard
- On-board maintenance videos available
- Software available in multiple languages

AbbottLink® DRM

- AbbottLink® is a Device Relationship Management system that allows Abbott to gather system data
- Data is encrypted and transferred over the internet to help improve the troubleshooting process

Harmonize Laboratory Data With AlinIQ AMS Middleware

INCREASE OPERATIONAL EFFICIENCY

With AlinIQ AMS (Analyzer Management System) middleware, you can standardize operations across your laboratory system to increase resource utilization. AlinIQ AMS is an open, scalable solution that can connect virtually any analyzer or automation system to the LIS to better manage the flow of data throughout the entire workflow process.

AlinIQ AMS FUNCTIONALITY

- **Test Management:** Hematology results views and advanced autoverification rules for consistent results management
- **Sample Management:** Monitor steps in the sample workflow and tube logistics between facilities
- **Historical Reports:** Better understand and manage laboratory performance
- **Equipment Management:** Centralize the monitoring and control of analyzers and automation systems
- **Quality Management:** Tools designed to help with ISO 17025 compliance



SPECIFICATIONS	DESCRIPTIONS
Product Information	
Throughput	CBC + Differential up to 84 per hour
Sample Size	Open mode ≤ 150 µL, Sample Loader ≤ 230 µL
Reagents	Only 3 reagents plus optional reticulocyte reagent
Technology	
WBC and Differential	Optical MAPSS™ Multiple Scatterplot Analysis
RBC and Platelet	Optical analysis with no additional reagent or reflex testing requirement for PLTs
Reticulocyte	Optical analysis with New Methylene Blue NCCLS method, supravital staining technique

PARAMETERS			
White Cells	Red Cells		Platelets
WBC	RBC	RDW	PLT
NEU # and %	HGB	RETIC	MPV
LYM # and %	HCT		PCT*
MONO # and %	MCV		PDW*
EOS # and %	MCH		*Clinical significance has not been established for PCT and PDW. Therefore, they are not reportable in the US.
BASO # and %	MCHC		

ANALYTICAL MEASUREMENT RANGES		
Parameter	AMR	Units
WBC	0.02 – 246.8	x 10 ³ /µL
RBC	0.00 – 7.50	x 10 ⁶ /µL
HGB	0.0 – 25.0	g/dL
HCT	8.3 – 79.8	%
MCV	58 – 139	fL
RDW	10.0 – 29.8	%
PLT	0.00 – 3000	x 10 ³ /µL
MPV	4.3 – 17.2	fL

ELECTRICAL REQUIREMENTS				
Module	Voltage	Frequency	Max current	Max power consumption
Analyzer	100 – 240 VAC	50/60 Hz	5.0 – 2.2 amps	550 watts
Display	100 – 240 VAC	50/60 Hz	1.5 amps	50 watts

SYSTEM MEASUREMENTS				
Module	Height	Width	Depth	Weight
Analyzer	49.9 cm (19.25 in.)	86.4 cm (34.0 in.)	76.8 cm (30.25 in.)	105.2 kg (232.0 lbs.)
Printer	Refer to the printer manufacturer's specifications			

DATA MANAGEMENT

- Microsoft Windows based Operating System
- Rules-based result annotations
 - Decision rules
 - Up to 100 rules
 - Up to 48 result annotations
 - Fully customizable
- Touch Screen Monitor
- Full on-board QC
 - Summary statistics and Levey-Jennings plots
 - Moving averages (including WBC differential)
 - Westgard rules
- 10,000 results stored with graphics
- Work list capability
- Programmable patient and report limits
- Complete patient demographics
- Bar code reading: Code 39, Codabar, Code 128, Interleaved 2 of 5, ISBT
- Auto-calibration online guide
- On-board diagnostics and help videos

OPERATING ENVIRONMENT TEMPERATURE

15°C (59°F) to 30°C (86°F)

HUMIDITY

≤ 80% relative humidity, non-condensing indoor use

STANDARDS & SAFETY COMPLIANCE

- UL 61010-1
- CAN/CSA-C22.2 No. 61010-1
- ETL
- CE Mark
- IEC 61010-1
- IEC 60825-1
- IEC 61326-1
- IEC 61325-2-6

ORDERING INFORMATION

- 08H67-01 CELL-DYN Ruby analyzer
- 09H04-03 Accessory kit (RoHS)
- 08H02-06 19" Touch screen flat panel display
- 08H14-01 Membrane keyboard

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Rx Only

AlinIQ ALWAYS ON

